Table 1

Code	Protein*	Organism	Accession**	Reference	Author/Assignee
Sc-03	RFS	***Beta vulgaris***	E37133	09/301,766	Sumitomo Chemical
Sc-05	RFS	***Brassica juncea***	E36417	09/301,766	Sumitomo Chemical
Sc-02	RFS	***Vicia faba***	E24423	08/992,914	Sumitomo Chemical
Sc-04	RFS	***Glycine max***	E24424	08/992,914	Sumitomo Chemical
Aj-05	RFS	***Cucumis sativus***	AF073744	Family GH36***	Ohsumi et al.
PsRFS	RFS	***Pisum sativum***	AJ426475	Family GH36	Peterbauer et al.
HvSIP	SIP	***Hordeum vulgare***	M77475	Family GH36	Heck et al.
PsSTS-1	STS	***Pisum sativum***	AJ311087	Family GH36	Peterbauer et al.
PsSTS-2	STS	***Pisum sativum***	AJ512932	Family GH36	Peterbauer et al.
VaSTS	STS	***Vigna angularis***	Y19024	Family GH36	Peterbauer et al.
AmSTS	STS	***Alonsoa meridionalis***	AJ487030	Family GH36	Voitsekhovskaja
SsSTS	STS	***Stachys affinis***	AJ344091	Family GH36	Pesch and Schmitz

*Protein: RFS, Raffinose synthase; SIP, Seed Imbibition Protein; STS, Stachyose synthase.

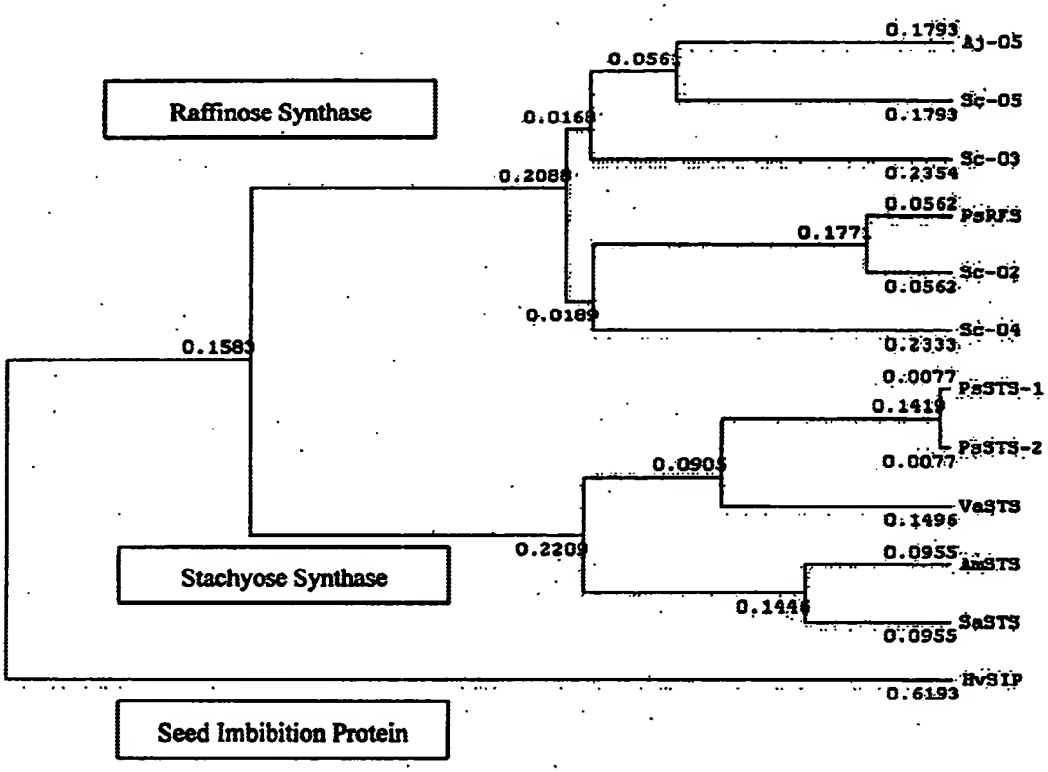
**Accession: GenBank Accession Number.

***Family GH36: glycoside hydrolase family 36 (see Carbohydrate-Active Enzymes (CAZy) database: http://afmb.cnrs-mrs.fr/CAZY/GH_36.html)

Table 2

Code	Sc-02	Sc-03	Sc-04	Sc-05	PsRFS	Aj-05	HvSIP	AmSTS	PsSTS-1	PsSTS-2	SaSTS	VaSTS
amino acids	800	783	611	777	798	784	757	868	853	847	863	857
Sc-02		62	54	62	89	64	39	43	43	42	42	43
Sc-03			50	63	63	66	39	42	43	42	42	43
Sc-04				50	54	50	29	35	35	35	34	36
Sc-05					62	70	39	44	44	43	44	45
PsRFS						64	38	42	43	43	42	43
Aj-05							38	42	44	43	43	43
HvSIP								33	34	34	34	34
AmSTS									64	64	83	64
PsSTS-1										98	65	75
PsSTS-2											65	74
SaSTS												65
VaSTS												

Fig. 1


[GENETYX : Evolutionary tree]
Date : 2004.2.4
Method: UPGMA
Raffinose Synthase
Stachyose Synthase
Seed Imbibition Protein
0.1793
Aj-05
0.0563
Sc-05
0.1793
0.0168
Sc-03
0.2354
0.2088
0.0562
PsRFS
0.1771
Sc-02
0.0562
0.0189
Sc-04
0.2333
0.1583
0.0077
PsSTS-1
0.1419
PsSTS-2
0.0077
0.0905
VaSTS
0.1496
0.2209
0.0955
AmSTS
0.1446
SaSTS
0.0955
HvSIP
0.6193